Tec students propose solutions for small businesses to MIT

A group of students from the **Tec de Monterrey** have collaborated with the **[MIT Low Income Firms Transformation (LIFT) Lab](#)** to develop **solutions and proposals** for improving **small businesses in Mexico.**

Engineering students from **13 Tec campuses** participated in the **collaboration, conducting a study** on the **challenges and behaviors** of **small businesses** in **various parts of Mexico** over one semester.

Noteworthy research projects were presented at the **Tec's Santa Fe campus** on **Thursday, February 16,** and the event featured a **panel** of **Massachusetts Institute of Technology (MIT) researchers**.

The **MIT LIFT Lab** is a **research center** that aims to **alleviate poverty** in **developing countries** through **initiatives** to ensure **SME growth** in the region.

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Small steps to big changes for microenterprises

The **challenge,** entitled "**Innovating the Traditional Retail Channel in Latin America,"** aimed to **create improvement proposals** for **Mexican microenterprises,** based on a **quantitative study**.

*"The goal was **to develop improvement proposals** through **statistical techniques using data.** The students used **their data and that collected by their classmates in order to make these proposals,"** said **Karla Valenzuela, Director of the School of Engineering and Sciences at the Santa Fe Campus**.

For his part**, Josué Velazquez, Director of the MIT LIFT Lab,** highlighted the **importance of the data** collected in transforming **microenterprise supply chains**.

*"We wanted to give them the **opportunity** to **look at the data** and be able to **use techniques,** begin an **applied project**, and at the same time, for the **results** to have an **impact."**

"Eventually, what we really want is to implement the ideas and translate them into action." *Karla Valenzuela*

*"What **I love** is that this **could result** in something that **other students see in their textbooks or syllabuses in the future,** and that's very **inspiring,"*** Velázquez added.

Over 15 final proposals were presented for the challenge during the event, and the students had the **opportunity to travel to Mexico City** to **share** their **findings** with the **MIT LIFT Lab research team**.

*"We laid out the **steps to be followed** by **entrepreneurs and small business owners** in order to **survive and keep the economy** of our state (Querétaro) alive,"* said **Santiago Silva**, *a* **Mechatronics Engineering** student **at the Querétaro campus**.

*"I think we also **provided a lot of support for MIT students** who are **studying for their master's degrees** and it was mainly **validating part of their work**,"* added his teammate, **Kevin Miranda, a Mechatronics Engineering student**.

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Generating solutions from education

The **collaboration with MIT** was carried out through the **Tec21 Educational Model,** with the **MIT LIFT Lab** serving as a **training partner** for the **"Introduction to Data Science Projects" Engineering Training Unit**.

*"A few months ago, the **MIT LIFT Lab approached us** to **develop a project** in which students could **participate** and discover the **problems the country is facing through this experience**.*

*"We looked for a **training unit,** and the **Tec21 Educational Model** allows us to bring in a **training partner** and a **real problem** to implement techniques and tools for **students to learn,"** said **Kara Valenzuela**.

According to the director, the **first pilot** was carried out with students from the **Santa Fe Campus**, but the **training unit** was offered nationwide to 3rd semester **engineering students** studying **Innovation and Transformation**.

*"We had **over 1,000 students involved in the project** and over **20 professors.** That was **last semester's assignment,** to get to the **data collection phase**."*

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Tec and MIT making a difference together

Josué Velazquez explained that the **connection with students** aimed to create **experiential learning experiences,** enrich MIT **postgraduate research, and generate value for the region**.

*"We were interested in **generating a learning experience** where students would be **out on the field** and could **better understand the Mexican context,** particularly in this sector, which is the most **important** from an **economic point of view**."*

*"What's more**, this project** is **serving as the engine for research we're doing at MIT. We use** the data so that researchers can do **analysis to transform the traditional microbusiness***

channel," he explained.

"What I love is that this could result in something that other students see in their textbooks or syllabuses in the future, and that's very inspiring." - Josué Velázquez

According to **Karla Valenzuela,** the project **generated value for industry** and provided students with the **opportunity to make a difference**.

*"I would say that **the biggest impact is for the students,** who realize that what they do, what they look at**, what they can contribute, can really make a difference,** and a big difference**. That's the most valuable part**."*

*"What **this gives us** are **students who are really interested in this type of problem** and really **bring value** to the **people** and **microenterprises that need it most**,"* shared the director.

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For her part, **the director** also said that **they will seek to replicate this** collaboration **exercise in the future**.

*"We will aim **to do it every year, for the MIT LIFT Lab to be the training partner for this training unit** and for this analysis **to enable postdoctoral MIT students** to **generate** further initiatives and detailed analysis."*

*"Eventually, **what we really want is to implement the ideas**, and translate them into action,"* she concluded.

The **winners of the challenge** were **students from the Querétaro campus,** with their **"MicroBigChange" proposal** to implement **new technologies** and **improvements** to microenterprises in **Santiago de Querétaro**.

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